

Developmental Biology

An International Journal

Published under the Auspices of the Society for Developmental Biology

M. V. EDDS, JR., *Editor-in-Chief*

Consulting Editors

H. DENIS • M. FELDMAN • G. GIUDICE • W. S. HILLMAN

A. LANG • B. PIERCE • S. ROSEMAN • J. W. SAUNDERS, JR.

L. SAXEN • R. SCHIMKE • H. A. SCHNEIDERMAN

R. SIDMAN • D. SLAUTTERBACK • F. E. STOCKDALE

I. M. SUSSEX • A. SUSSMAN • P. TARDENT • H. URSPRUNG

N. K. WESSELS • F. H. WILT

Volume 25 • 1971



ACADEMIC PRESS, NEW YORK AND LONDON

COPYRIGHT © 1971, BY ACADEMIC PRESS, INC.

ALL RIGHTS RESERVED

NO PART OF THIS VOLUME MAY BE REPRODUCED IN ANY FORM,
BY PHOTOSTAT, MICROFILM, BY RETRIEVAL SYSTEM, OR ANY OTHER
MEANS, WITHOUT WRITTEN PERMISSION FROM THE PUBLISHERS.

Made in the United States of America

Contents of Volume 25

NUMBER 1, MAY 1971

ASHER SHAINBERG, GAD YAGIL, AND DAVID YAFFE. Alterations of Enzymatic Activities during Muscle Differentiation <i>in Vitro</i> (Accepted December 4, 1970)	1
PERRY KARFUNKEL. The Role of Microtubules and Microfilaments in Neurulation in <i>Xenopus</i> . (Accepted December 16, 1970)	30
BRYAN P. TOOLE AND JEROME GROSS. The Extracellular Matrix of the Regenerating Newt Limb: Synthesis and Removal of Hyaluronate prior to Differentiation. (Accepted December 22, 1970)	57
MARY ANN HANDEL AND L. E. ROTH. Cell Shape and Morphology of the Neural Tube: Implications for Microtubule Function. (Accepted December 23, 1970)	78
JOHN ZWAAN AND THOMAS L. PEARCE. Cell Population Kinetics in the Chicken Lens Primordium during and shortly after its Contact with the Optic Cup. (Accepted December 28, 1970)	96
KLAUS KALTHOFF. Photoreversion of UV Induction of the Malformation "Double Abdomen" in the Egg of <i>Smittia</i> spec. (Diptera, Chironomidae). (Accepted December 29, 1970)	119
ARNOLD M. CLARK, ADAIR B. GOULD, AND SUSAN F. GRAHAM. Patterns of Development among Mosaics in <i>Habrobracon juglandis</i> . (Accepted January 7, 1971)	133
P. C. LEE AND J. R. FISHER. Synthesis of Xanthine Dehydrogenase in Liver and Pancreas of Developing Chicks	149
R. E. AUSTIC AND C. R. GRAU. Degeneration of the Eyes and Central Nervous System of Chick Embryos Subjected to Phenylalanine or Tyrosine Deficiency	159

NUMBER 2, JUNE 1971

SHERILL K. CURTIS AND E. PETER VOLPE. Modification of Responsiveness to Allografts in Larvae of the Leopard Frog by Thyremectomy (Accepted January 19, 1971)	177
MARCIA J. LIPSON, RAYMOND A. CERSKUS, AND JEREMIAH E. SILBERT. Glycosaminoglycans and Glycosaminoglycan-De-	

grading Enzyme of <i>Rana catesbeiana</i> Back Skin during Late Stages of Metamorphoses (Accepted January 19, 1971) . . .	198
X JOHN F. HARTMANN, MIRIAM M. ZIEGLER, AND DONALD G. COMB. Sea Urchin Embryogenesis. I. RNA Synthesis by Cytoplasmic and Nuclear Genes during Development (Accepted January 19, 1971) . . .	209
L. DENNIS SMITH AND R. E. ECKER. The Interaction of Steroids with <i>Rana pipiens</i> Oocytes in the Induction of Maturation (Accepted January 19, 1971) . . .	232
ROBERT S. REDMAN AND LEO M. SREEBNY. Morphologic and Biochemical Observations on the Development of the Rat Parotid Gland (Accepted January 20, 1971) . . .	248
JOSEPH ILAN AND JUDITH ILAN. Stage-Specific Initiation Factors for Protein Synthesis during Insect Development (Accepted January 20, 1971) . . .	280
THOMAS S. ARGYRIS. Additive Effects of Phenobarbital and High Protein Diet on Liver Growth in Immature Male Rats (Accepted January 20, 1971) . . .	293
F. C. STEWARD, J. T. BARBER, E. F. BLEICHERT, AND W. M. ROCA. The Behavior of Shoot Apices of <i>Tulipa</i> in Relation to Floral Induction, (Accepted January 21, 1971) . . .	310
ERRATUM . . .	336

NUMBER 3, JULY 1971

DAVID J. GUSSECK AND JERRY L. HEDRICK. A Molecular Approach to Fertilization. I. Disulfide Bonds in <i>Xenopus laevis</i> Jelly Coat and a Molecular Hypothesis for Fertilization (Accepted January 19, 1971) . . .	337
DON P. WOLF AND JERRY L. HEDRICK. A Molecular Approach to Fertilization. II. Viability and Artificial Fertilization of <i>Xenopus laevis</i> Gametes (Accepted January 19, 1971) . . .	348
DON P. WOLF AND JERRY L. HEDRICK. A Molecular Approach to Fertilization. III. Development of a Bioassay for Sperm Capacitation (Accepted January 19, 1971) . . .	360
EDWARD BERGER AND FOTIS C. KAFATOS. Quantitative Studies of Prococoonase Synthesis and Accumulation during Development (Accepted January 25, 1971) . . .	377
FLORENCE MOOG, EDWARD H. BIRKENMEIER, AND HOWARD S. GLAZIER. Leucynaphthylamidase in the Small Intestine of the Mouse: Normal Development and Influence of Cortisone and Antibiotics (Accepted January 25, 1971) . . .	398
JOHN E. MORRIS AND A. A. MOSCONA. The Induction of Glutamine	

Synthetase in Cell Aggregates of Embryonic Neural Retina: Correlations with Differentiation and Multicellular Organization (<i>Accepted February 1, 1971</i>)	420
---	-----

ERIC H. DAVIDSON, BARBARA R. HOUGH, MARGARET E. CHAMBERLIN, AND ROY J. BRITTEN. Sequence Repetition in the DNA of <i>Nassaria (Ilyanassa) obsoleta</i> (<i>Accepted February 1, 1971</i>)	445
---	-----

JANE L. COULOMBRE AND A. J. COULOMBRE. Metaplastic Induction of Scales and Feathers in the Corneal Anterior Epithelium of the Chick Embryo (<i>Accepted February 3, 1971</i>)	464
---	-----

NUMBER 4, AUGUST 1971

TRIBUTE TO MAC V. EDDIS, JR.	iii
--------------------------------------	-----

JOHN J. MARCHALONIS. Ontogenetic Emergence of Immunoglobulins in <i>Rana pipiens</i> Larvae (<i>Accepted February 2, 1971</i>)	479
--	-----

SARAH E. HITCHCOCK. Detection of Actin Filaments in Homogenates of Developing Muscle Using Heavy Meromyosin (<i>Accepted February 4, 1971</i>)	492
--	-----

R. LANE SMITH AND H. S. FORREST. Synthesis of 5 S and Transfer RNA during Embryogenesis in the Milkweed Bug, <i>Oncopeltus fasciatus</i> (<i>Accepted February 5, 1971</i>)	502
---	-----

DAVID SCHUBERT, SUSIE HUMPHREYS, FRANCOISE DE VITRY, AND FRANCOIS JACOB. Induced Differentiation of a Neuroblastoma (<i>Accepted February 8, 1971</i>)	514
--	-----

RICHARD MAYNE, JOSEPH W. SANGER, AND HOWARD HOLTZER. Inhibition of Mucopolysaccharide Synthesis by 5-Bromodeoxyuridine in Cultures of Chick Amnion Cells (<i>Accepted February 9, 1971</i>)	547
---	-----

MARILYN A. WILLIAMS AND L. DENNIS SMITH. Ultrastructure of the "Germinal Plasm" During Maturation and Early Cleavage in <i>Rana pipiens</i> (<i>Accepted February 11, 1971</i>)	568
---	-----

PAUL MANDARON. Sur le mécanisme de l'évagination des disques imaginaux chez la Drosophile (<i>Accepted February 18, 1971</i>)	581
---	-----

JOHN H. POSTLETHWAIT AND HOWARD A. SCHNEIDERMAN. Pattern Formation and Determination in the Antenna of the Homoeotic Mutant <i>Antennapedia</i> of <i>Drosophila melanogaster</i> (<i>Accepted February 24, 1971</i>)	606
---	-----

JOHN G. SCANDALIOS AND MICHAEL R. FELDER. Developmental Expression of Alcohol Dehydrogenases in Maize (<i>Accepted March 1, 1971</i>)	641
---	-----

BARBARA FEDECKA-BRUNER, MICHAEL ANDERSON, AND DAVID EPEL. Control of Enzyme Synthesis in Early Sea Urchin Development: Aryl Sulfatase Activity in Normal and Hybrid Embryos (<i>Accepted March 1, 1971</i>)	655
---	-----

DÉSIRÉ BULLIERE. Utilisation de la régénération intercalaire pour l'étude de la détermination cellulaire au cours de la mor- phogenèse chez <i>Blabera craniifer</i> (Insecte Dictyoptère) (Ac- cepted March 4, 1971)	672
ERRATUM	710
AUTHOR INDEX	711
SUBJECT INDEX	713
CUMULATIVE INDEX, VOLUMES 1-25 (1959-1971)	716